

CLAIMS

1. A drive disconnect device for releasably connecting an output shaft to a drive shaft comprising a drive transfer element movable between a first position where it drivingly connects the drive shaft to the output shaft, and a second position where there is no driving connection between the drive shaft and the output shaft, and the output shaft, wherein at least one actuator is arranged to act on the drive transfer element so as to urge it to the second position.
2. A drive disconnect device as claimed in claim 1, in which the at least one actuator acts directly on the drive transfer element.
3. A drive disconnect device as claimed in claim 2, in which the at least one actuator can, in use, move the drive transfer element to the second position irrespective of the load or torque being transferred through the drive disconnect device.
4. A drive disconnect device as claimed in claim 1, in which the at least one actuator is a fluid operated actuator.
5. A drive disconnect device as claimed in claim 1, in which the at least one actuator comprises a piston within a cylinder with the piston biased towards a predetermined position.
6. A drive disconnect device as claimed in claim 5, in which the piston is spring biased towards the predetermined position.
7. A drive disconnect device as claimed in claim 5, in which the piston is hydraulically biased towards the predetermined position.
8. A drive disconnect device as claimed in claim 5, in which the at least one piston is selectively connectable to a high pressure fluid supply via a control valve.
9. A drive disconnect device as claimed in claim 5, in which the at least one piston is selectively connectable to a low pressure region via a control valve.

10. A drive disconnect device as claimed in claim 8, in which the control valve is an electrically operated valve.
11. A drive disconnect device as claimed in claim 4, in which an accumulator is provided to store sufficient pressurised fluid to maintain operation of the disconnect device in the event of loss or degradation of a supply of pressurised fluid.
12. A drive disconnect device as claimed in claim 1, further comprising a lock for locking one of the drive transfer element and at least one piston in a drive disconnect position.
13. A drive disconnect device as claimed in claim 12, in which the lock comprises a pin or other detent that engages with one of the drive transfer element and the actuator when the drive transfer element is at the second position.
14. A drive disconnect device as claimed in claim 12, wherein the lock is manually released.
15. A drive disconnect device as claimed in claim 1, wherein the drive transfer element is biased towards the first position.
16. A drive disconnect device as claimed in claim 1 wherein the drive transfer element is coaxially disposed around the output shaft and is in splined engagement therewith such that the drive transfer element is axially slidable on the output shaft.
17. A drive disconnect device as claimed in claim 1, in which the drive transfer element includes a flange against which at least one of the actuators and a spring bias element acts.
18. A generator including a drive disconnect device as claimed in claim 1.